

Serial No. 10/790,211  
Attorney Docket No. 01-562

### REMARKS

Please consider the following comments. Following this response, claims 1, 2, and 4-16 are pending. Applicants respectfully request reconsideration and allowance of this application in view of the above amendments and the following remarks.

#### *Priority*

Applicants observe that the Examiner has indicated that priority is acknowledged and all certified copies of the priority documents have been received.

#### *Information Disclosure Statement*

Applicants acknowledge and appreciate receiving an initialed copy of the forms PTO-1449 that were filed on March 2, 2004, and July 19, 2005.

#### *Claim Rejections – 35 U.S.C. § 112*

The Examiner has rejected claims 3 and 16 under 35 U.S.C. § 112, first paragraph, as allegedly failing to comply with the written description requirement. In particular, the Examiner asserts that the specification does not support a claim to an annealing temperature above 1200°C, since the Applicant discloses by way of example that in one embodiment the upper limit of the annealing temperature is 1200°C. Applicant respectfully traverses this assertion.

Applicant's specification broadly notes that "the annealing is performed equal to or higher than 1150°C so that the inner distortion in the gate insulation film 5 is sufficiently removed." (See, e.g., Applicant's specification, page 24, lines 8-10.) The specification then goes on to cite an exemplary upper limit for the annealing temperature of 1200°C based on the maximum temperature of the semiconductor device and the withstand temperature of the substrate 3. (See, e.g., Applicant's specification, page 24, lines 8-10.) But this is only an

Serial No. 10/790,211  
Attorney Docket No. 01-562

exemplary upper limit. In other embodiments in which a maximum temperature of a semiconductor device or a withstand temperature of substrate were higher, the upper limit could rise. Thus it would be appropriate for Applicant to simply claim that the annealing temperature was "equal to or higher than 1150°C."

By this response Applicant has cancelled claim 3, thus rendering this rejection moot as it pertains to this claim.

By this response Applicant has amended claim 16 to remove the language that the Examiner disagreed with. Claim 16 depends from amended claim 11, which now recites that the annealing temperature is equal to or higher than 1150 degrees Celsius and is equal to or less than 1200 degrees Celsius. This newly-recited feature limits the annealing temperature to being less than or equal to 1200 degrees Celsius.

For at least the reasons given above, Applicant submits that claim 16, as amended, fully comply with the written description requirement set forth in 35 U.S.C. § 112, first paragraph. Applicant therefore respectfully requests that the Examiner withdraw the rejection of claims 1 and 11 under 35 U.S.C. § 112, first paragraph, as allegedly failing to comply with the written description requirement.

The Examiner has rejected claims 1 and 11 under 35 U.S.C. § 112, second paragraph, as allegedly failing to particularly point out and distinctly claim the subject matter which the applicant regards and the invention. In particular, the Examiner has asserted that the term "through" should be replaced with the term "on" in these claims.

By this response Applicant has amended claims 1 and 11 as suggested by the Examiner. These claim amendments are being made to correct a formal matter and not in response to an art

Serial No. 10/790,211  
Attorney Docket No. 01-562

rejection. As a result, they should not limit the doctrine of equivalents as it applies to these claims.

For at least the reasons given above, Applicant submits that claims 1 and 11, as amended, are fully definite and meet the requirements set forth in 35 U.S.C. § 112, second paragraph. Applicant therefore respectfully requests that the Examiner withdraw the rejection of claims 1 and 11 under 35 U.S.C. § 112, second paragraph, as allegedly failing to particularly point out and distinctly claim the subject matter which the applicant regards and the invention.

***Claim Rejections – 35 U.S.C. § 102***

The Examiner has rejected claim 1 under 35 U.S.C. § 102(b) as being allegedly anticipated by United States Patent No. 6,465,325 to Ridley et al. ("Ridley").

By this response Applicant has amended claim 1 to recite that the substrate is made of silicon, and the annealing temperature is higher than or equal to 1150 degrees Celsius and is less than or equal to 1200 degrees Celsius. Nothing in Ridley discloses that an annealing temperature higher than 1150 degrees Celsius be used. In fact, the Examiner acknowledges this point in section 5 of the pending Office Action.

Thus, Ridley does not disclose every feature recited in amended claim 1. Applicant therefore respectfully requests that the Examiner withdraw the rejection of claim 1 under 35 U.S.C. § 102(b) as being allegedly anticipated by Ridley.

***Claim Rejections – 35 U.S.C. § 103***

The Examiner has rejected claim 3 under 35 U.S.C. § 103(a) as being allegedly unpatentable over Ridley in view of United States Patent No. 6,258,640 to Miyazaki et al. ("Miyazaki").

Serial No. 10/790,211  
Attorney Docket No. 01-562

By this response, Applicant has cancelled claim 3, thus rendering moot this ground of rejection.

Applicant therefore respectfully requests that the Examiner withdraw the rejection of claim 3 under 35 U.S.C. § 103(a) as being allegedly unpatentable over Ridley in view of Miyazaki.

The Examiner has rejected claims 1, 5, 7, 11, and 13 under 35 U.S.C. § 103(a) as being allegedly unpatentable over United States Patent No. 6,469,345 to Aoki et al. ("Aoki") in view of United States Patent No. 6,350,665 to Jin et al. ("Jin").

By this response Applicant has amended claims 1 and 11 to recite that the annealing temperature is higher than 1150 degrees Celsius and is equal to or less than 1200 degrees Celsius. Nothing in Aoki or Jin, alone or in combination, discloses or suggests this feature.

The Examiner acknowledges that Aoki fails to disclose annealing a substrate, as recited in claims 1 and 11. For this teaching he relies upon Jin. However, Jin simply describes performing a rapid thermal annealing (RTA) step at a temperature in the general range of 800 to 1000°C. (See, e.g., Jin, column 13, lines 44-53.) Nothing in Jin discloses or suggests that the annealing temperature be equal to or higher than 1150 degrees Celsius and be equal to or less than 1200 degrees Celsius.

Claims 5 and 7 depend from claim 1 and are allowable for at least the reasons given above for claim 1. Claim 13 depends from claim 11 and is allowable for at least the reasons given above for claim 11.

Applicant therefore respectfully requests that the Examiner withdraw the rejection of claims 1, 5, 7, 11, and 13 under 35 U.S.C. § 103(a) as being allegedly unpatentable over Aoki in view of Jin.

Serial No. 10/790,211  
Attorney Docket No. 01-562

The Examiner has rejected claims 2, 6, 8-10, 14, and 15 under 35 U.S.C. § 103(a) as being allegedly unpatentable over Aoki in view of Jin and further in view of United States Patent No. 6,455,378 to Inagawa et al. ("Inagawa").

Claims 2, 6, and 8-10 depend variously from claim 1 and are allowable for at least the reasons given above for claim 1. Claims 14 and 15 depends from claim 11 and are allowable for at least the reasons given above for claim 11.

Nothing in Inagawa cures the deficiencies in Aoki and Jin noted above. In particular, nothing in Inagawa discloses or suggests that the annealing temperature be higher than 1150 degrees Celsius and be equal to or less than 1200 degrees Celsius.

Applicant therefore respectfully requests that the Examiner withdraw the rejection of claims 2, 6, 8-10, 14, and 15 under 35 U.S.C. § 103(a) as being allegedly unpatentable over Aoki in view of Jin and further in view of Inagawa.

The Examiner has rejected claims 3, 12, and 16 under 35 U.S.C. § 103(a) as being allegedly unpatentable over Aoki in view of Jin and further in view of Miyazaki.

By this response, Applicant has cancelled claim 3, thus rendering moot this ground of rejection as it pertains to that claim.

Claims 12 and 16 depend from claim 11 and are allowable for at least the reasons given above for claim 11.

Nothing in Miyazaki cures the deficiencies in Aoki and Jin noted above. Miyazaki discloses conducting rapid thermal annealing (RTA) at a temperature of 1150°C. (See, e.g., Miyazaki, column 10, lines 25-33.) However, nothing in Miyazaki discloses or suggests that the

Serial No. 10/790,211  
Attorney Docket No. 01-562

annealing temperature be *higher than* 1150 degrees Celsius and be equal to or less than 1200 degrees Celsius.

Applicant therefore respectfully requests that the Examiner withdraw the rejection of claims 3, 12, and 16 under 35 U.S.C. § 103(a) as being allegedly unpatentable over Aoki in view of Jin and further in view of Miyazaki.

The Examiner has rejected claim 4 under 35 U.S.C. § 103(a) as being allegedly unpatentable over Aoki in view of Jin, further in view of Miyazaki., and further in view of Inagawa.

Claim 4 has been amended to depends from claim 1 and is allowable for at least the reasons given above for claim 1.

As noted above, nothing in Miyazaki or Inagawa cures the deficiencies in Aoki and Jin noted above. In particular, nothing in Miyazaki or Inagawa discloses or suggests that the annealing temperature be higher than 1150 degrees Celsius and is equal to or less than 1200 degrees Celsius.

Applicant therefore respectfully requests that the Examiner withdraw the rejection of claim 4 under 35 U.S.C. § 103(a) as being allegedly unpatentable over Aoki in view of Jin, further in view of Miyazaki, and further in view of Inagawa.

Serial No. 10/790,211  
Attorney Docket No. 01-562


*Conclusion*

For all the reasons advanced above, Applicants respectfully submit that pending claims 1, 2, and 4-16, as amended are allowable.

In view of the foregoing, Applicants respectfully submit that this application is in condition for allowance. A timely notice to that effect is respectfully requested. If questions relating to patentability remain, the examiner is invited to contact the undersigned by telephone.

Please charge any unforeseen fees that may be due to Deposit Account No. 50-1147.

Respectfully submitted,

  
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